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A POPULAR TREATISE ON THE COMMON INDIAN
SNAKES.

ILLUSTRATED BY COLOURED PLATES AND DIAGRAMS.

BY

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Part XI with Plate XI and Diagram and Map.

(Continued from page 299 of this Volume.)

The genus *Oligodon* as regarded by Mr. Boulenger in 1894* comprised 18 species, 17 of which were known to inhabit Southern Asia from Baluchistan in the West to the Philippines in the East; the one exception being an Egyptian snake. Since this date Mr. Boulenger has described two new species, *viz.*, *erythrogaster* from Nepal, † and *herberti* from Mogok in Upper Burma, ‡ and given his authority for the inclusion in this genus of the Andaman snake *woodmasoni* § which he had previously regarded as a *Simotes*.

I have also added three new species, *viz.*, *nedouyalli* ¶ from Sando- way, Burma, *melaneus* || from Tindharia in the Eastern Himalayas and *erythrorhachis* from Nanwang, Assam, the description of which will

* Catalogue, Vol. II, p. 233.

† Records, Ind. Mus., Vol. 1, Part. III, 1907.

‡ Bomb. Nat. Hist. Journ., XVI, p. 235.

§ Annandale, J. A. S., Bengal, 1905, p. 173.

¶ Bomb. Nat. Hist. Journ., XVI, p. 251.

|| Bomb. Nat. Hist. Journ., Vol. XIX., p. 349.

appear shortly in this journal. The genus therefore as now constructed includes 24 species. It is very closely allied to the genus *Simotes*, in fact it remains to be seen whether there is a natural division between the two genera, and if so again whether some of the species as now arranged have not been intermixed.*

THE VARIEGATED KUKRI SNAKE.

OLIGODON SUBGRISEUS (Duméril et Bibron).

History.—There is little if any doubt but that the earliest specimen of *subgriseus* of which we have any record is that collected at Vizagapatam and figured by Russell† 113 years ago, under the vernacular name “wanapa pam,” scientific nomenclature in those days not having come into use. It is possible too that the snake from Canara alluded to by Jerdon as *Xenodon dubium* in 1853‡ was this species, as he says the scales were in 15 rows, but he gives no description of it so that his name has been ignored. I cannot however see cause for dismissing the name *tæniolata*§ applied by the same author to this snake in 1853 in favour of Duméril and Bibron’s name *subgriseus* in 1854.¶

Nomenclature. (a) *Scientific.*—The generic name (from the Greek *ὀλίγος* few, and *ὀδὸν* tooth) was given by Boie to a Javan snake (*O. bitorquatus*) in 1827 on account of the paucity of its teeth compared with other ophidians. The specific title is from the Latin “sub” beneath, and “griseus” grey, the original specimen being this hue on the belly, a circumstance due, I think, to the preservative since it is white in life.

English. (b)—The Variegated Kukri Snake. The name kukri snake suggests itself to me as appropriate to the species of the genera *Oligodon*

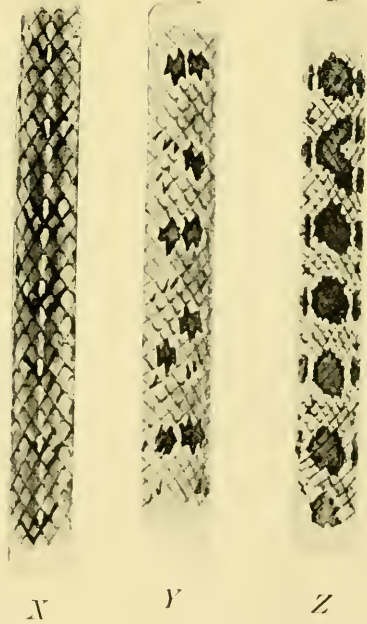
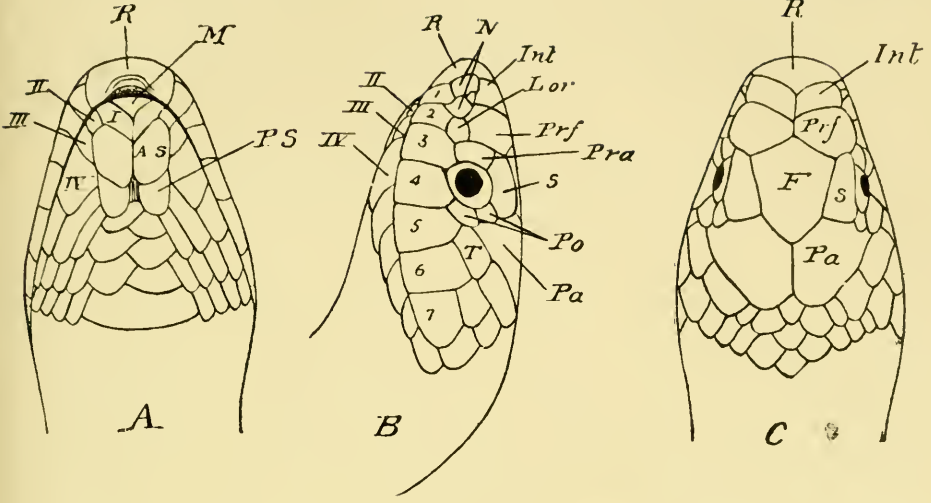
* My doubts are the outcome of a study of the skulls of 5 species of these genera in my collection. Günther (Rept. Brit. Ind., p. 205) divided the genera on the palatine teeth including as *Simotes* all those species in which these teeth were present, and reserving the name *Oligodon* for those in which they were absent. Boulenger (Cat., pp. 215 and 233) finding that species which he considered *Oligodon* on other grounds possessed two or three palatine teeth, divided the genera on the presence or absence of the pterygoid teeth, conceding the name *Simotes* to the former, and *Oligodon* to the latter, and supplemented this arrangement by the number of the maxillary teeth, 6 to 8 being present in *Oligodon* and 8 to 12 in *Simotes*. As a matter of fact neither arrangement is tenable as both palatine and pterygoid teeth are present in two out of three of the species in my collection which Mr. Boulenger considers *Oligodon*, viz., *subgriseus*, and *venustus*. In the third case (*dorsalis*) their absence is doubtful.

† Ind. Serp., Vol. 1, Plate XIX.

‡ J. A. S., Bengal, XXII, p. 528.

§ J. A. S., Bengal, XXII, p. 528 (not to be confused with the *Coronella tæniolata* of Boettger which is the *Rhadinea undulata* of Brazil under present day nomenclature).

¶ VII., p. 59.



OLIGODON SUEGRISEUS.

A, B, C.—Head shields (X 3).

D.—Maxilla.

E.—Outline of blade of kukri.

F.—Dentary (*d*) and part of articular (*a*) bones of mandible (much enlarged).

X, Y, Z.—Colour varieties

and *Simotes*, because the hindmost maxillary teeth are remarkably flattened (compressed) and their outline and blade-like character remind one forcibly of a goorkhas kukri. (See Figs. D and E of Diagram.)

(c) *Vernacular*.—According to Russell “wanapa pam” is the name applied to it by the natives about Vizagapatam. In Cannanore I heard it called “choorta” a term under which *Lycodon aulicus* is also confused.

Dimensions.—Adults are usually from 15 to 18 inches in length. The longest I know of is 1 foot $9\frac{1}{4}$ inches from Hyderabad (Sind).

General characters.—It is rather slender, and graceful in form and noticeable in possessing no indication of a neck. The girth is wonderfully uniform in the whole body length, the trunk round in section and smooth. The head is short, the muzzle truncate, and the eye small with a golden iris, and round pupil. The tail is short accounting for about one-seventh of the total length of the snake.

Identification.—It is the only snake to be found in the Plains of the Indian Peninsula in which the scale rows are 15 in the whole body length, and the anal shield divided with three possible exceptions. In Sind *Contia walteri* has been recorded a snake in which the subcaudals number from 73 to 82; in *subgriseus* they vary from 38 to 56. In the Himalayas from Simla to Darjeeling *Ablabes rappi* occurs, a mountain form which might straggle towards the adjacent Plains. This snake has only 6 supralabials, but *subgriseus* has 7. In Southern India *O. ellioti* may be confounded with it, but in possessing less than 31 subcaudals can be at once distinguished. Farther it is highly probable that this rare snake is a mountain form. It is only known from two specimens, the exact habitat in both instances not being on record.

In Ceylon it may be confused with its allies *O. sublineatus*, and *O. templetoni*. In both these species however the subcaudals number less than 35.

Colour and markings.—Like many of the other snakes I have dealt with in these papers, *O. subgriseus* presents considerable differences in its colour and markings. Of the various forms I think four deserve special mention but the fact that the first three of these are completely connected shows they are all merely variations of a single variety. The fourth form is, I think, probably a distinct species as

Günther originally believed it, however I prefer for the present to leave it as placed by Boulenger.

VARIETY A.—Body striped longitudinally. The belly unspotted.

Subvariety (a).—Striped longitudinally with no variegation, and few and obscure, or no cross-bars. (Fig. 2 of our Plate.)

Subvariety (b).—More or less variegated with short, oblique, lighter and darker streaks, which tend to arrange themselves into cross-bars. More or less distinctly striped longitudinally. (Fig. X of Diagram.)

Subvariety (c).—Like the last but with twin roundish spots placed side by side on the back. (Fig. Y of Diagram, and Fig. 1 of Plate.)

VARIETY B.—With a median dorsal series of roundish spots. No longitudinal stripes. Belly spotted near the edge of most of the ventrals. (Fig. Z of Diagram.)

Subvariety (a).—We have shown a good example in figure 2 of our plate. The ground colour is buff, and four more or less obvious pale brownish stripes pass down the body. The two upper and broader pass from the nape where they are confluent to the tail tip. On the body they involve the edge of the vertebral, and the two and a half adjoining rows. The lower and narrower stripes pass from the neck to the vent, and are placed on the contiguous halves of the 2nd and 3rd rows above the ventrals. The pale vertebral line is continuous, and confined to the middle of the vertebral row except anteriorly where it expands to the margins of the uppermost costal row. In many of these specimens, and perhaps in all an indication of the cross-bars typical of the next form may be seen if looked for in the anterior part of the body. The belly is pearly-white and unspotted. The head is marked with 3 dark chevrons; of these the anterior passes across the præfrontals, and reappears beneath the eye, the median has its apex on the frontal shield, and its limbs pass obliquely backwards to the gape, frequently blending with the posterior, which is the broadest and situated on the nape, its apex extending forwards to the parietals. These chevrons are usually complete, and discrete but may be more or less incomplete, or confluent. A dark streak (omitted by our artist) is always present on the 6th, or between the 6th and 7th supralabials, and there is frequently a streak in the suture between the 1st and 2nd supralabials. This form appears uncommon, and I only know of it from Ceylon.

Subvariety (b).—*Forma Typica.* This is the *tæniolata* of Jerdon

and is well figured by Russell.* It is the variety A of Boulenger. The ground colour is buff, pale brown, cedar-brown, or more rarely a light dun. There is a conspicuous variegation caused by lighter and darker streaks on the anterior-inferior margins of some of the scales. The darker streaks show a marked tendency to congregate at intervals and arrange themselves into cross-bars, which are usually narrowly outlined with buff. These cross-bars narrow or actually break up in the flanks, and are often rather ill-defined. In many specimens an intermediate series of a less distinct character alternate with them. If looked for longitudinal stripes similar to those in subvariety (a) are, I think, always apparent, though often obscure, and the vertebral streak is often interrupted. The belly is unspotted, and the head marks as in subvariety (a). It is much the commonest form, and the most widely distributed. Russell's specimen was from Vizagapatam,* and Jerdon recorded it from Madras.* Blanford obtained it in Ellore and Ajmere†. In our Society's collection there are specimens from Bombay, Deolali, Karwar, Khandalla, Khandesh, and Goa Ghats. I have lately seen a specimen in the Indian Museum from Dhikala (Garhwal District) and have acquired specimens myself from Delhi, Cannanore, Madras, Trichinopoly, Tuticorin, Vizianagram, Hyderabad (Sind), Dehra Dun and Shembaganur. In the British Museum it is recorded from the Anamallays.‡

Subvariety (c)—Figure 1 of our Plate. This is the *dubium* of Jerdon and the *spilonotus* of Günther.§ This form is very similar to the last but the cross-bars are modified to form two or four more or less confluent or completely detached roundish spots, the median of which are larger, and better defined, the lateral often being ill-defined or irregular in form. These marks remind one forcibly of a similar ornamentation seen in *O. venustus*, *Simotes splendidus* (Günther) and *S. albocinctus* variety *juglandifer* (Wall). Longitudinal stripes as in the previous forms are usually apparent if looked for. The vertebral streak is often more or less interrupted. The belly is unspotted, and the head marks are as in form (a). Jerdon's specimen was from Canara,

* Loc cit.

† J. A. S., Bengal, XLVIII, pp. 114 and 125.

‡ Günther. Rept. Brit. Ind., 1864, p. 207 and Plate XIX, fig. F.

§ But not the *binotatus* of Dumeril and Bibron as erroneously supposed by Boulenger (Cat., Vol. II, p. 243) This last is without doubt synonymous with *Simotes venustus* having, it is stated, 17 scale rows.

I have had it from Matheran and there are specimens in our Society's collection from Bombay and Satara.

Our coloured figures are taken from a specimen which does not show the arrangement of the dorsal marks in their most typical form, though the tendency to division in the cross-bars is obvious. Figure 1*b* is most misleading in the arrangement of its spots which are obviously from a very unusual specimen. It is to be regretted too that the longitudinal striping which Mr. Gerhardt showed so nicely in his original sketch has not been reproduced by our London artist, thus detracting from the latter's good work. Fig. Y of our diagram is very typical.

VARIETY D.—Boulenger's variety B.* The *fasciatus* of Günther. The ground colour is buff or pale yellowish-brown. A median series of largish, well-defined, round spots passes down the back, some of the anterior ones being often divided. Outside these are irregularly shaped, ill-defined, smaller, dark marks. There are no longitudinal stripes down the body, and any variegation noticeable is confined to the flanks. There are spots near the edge of most of the ventrals on each side. The head marks are as in the foregoing. The specimens recorded by Günther are from the Deccan and Matheran. Others have been recorded from Bombay† and Poon‡.

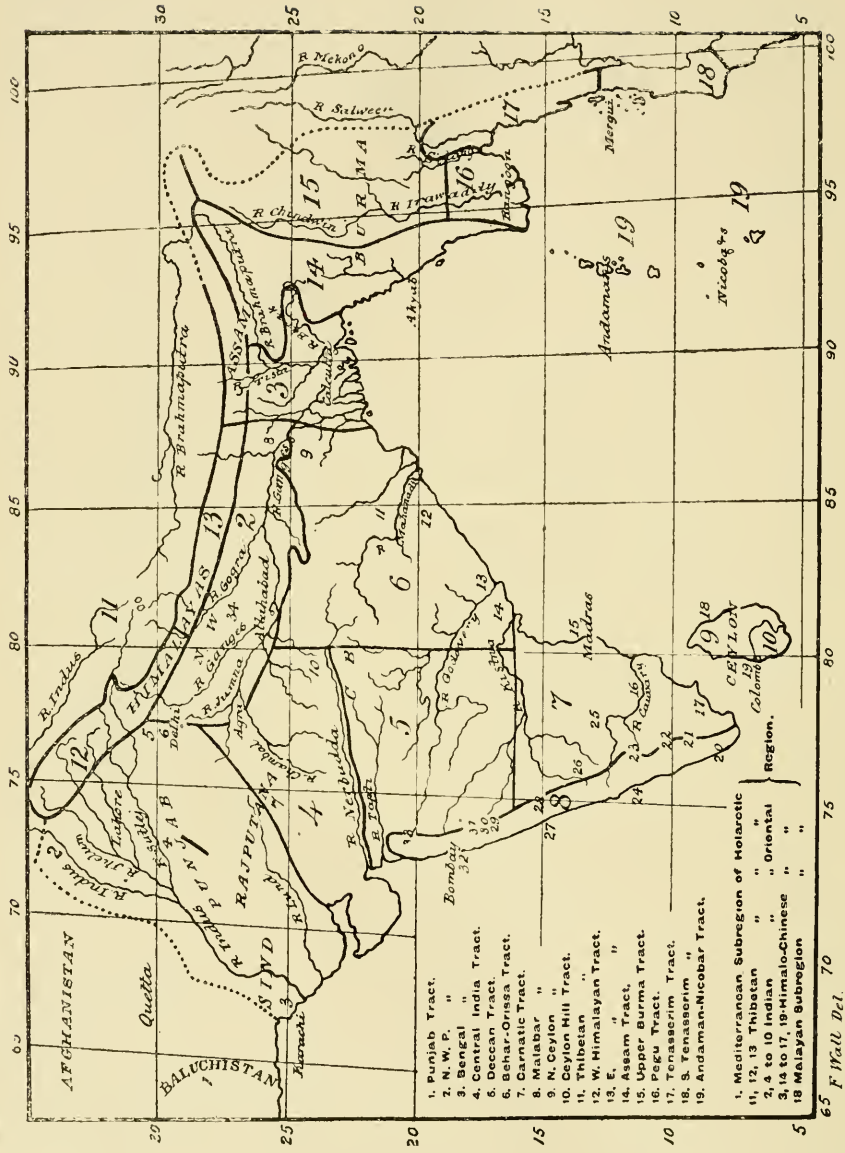
Though *subgriseus* is a common snake it will be seen that the records I have quoted above are rather meagre. This is due to the fact that many writers have not recorded the variety met with nor described the colouration sufficiently to enable me to place them with the above varieties.

Habits.—I know nothing that calls for special remark, beyond that it is evidently a snake of the Plains, but wanders into the Hills. I have a specimen (var b) from Shembaganur Palney Hills (circa 6,300 ft.) It is, I believe, not a jungle snake, but one that prefers open country where its sombre colouration is in harmony with a barren soil.

Disposition.—The few specimens that have come into my hands alive have all been particularly well behaved, allowing me to handle them freely without attempting to bite. Mr. Gleadow, however, in a letter to our Society mentions one that he wounded and attempted to carry home over a stick, but which repeatedly fell off and in replac-

* Loc. cit.

† Bomb. Nat. Hist. Journ., Vol. I, Cat. of Snakes. ‡ *Ibid.*, Vol. III, Cat. of Snakes.



Map showing Distribution of *Oligodon subspicatus*.

(The black numerals show localities it is known from.)

ing it "savagely attacked" him twice. It is a quietly disposed creature with sufficient spirit however to resent interference, and prompt it to make active attempts to escape when encountered.

Habits.—My acquaintance with the species in life is too limited to give any information in this direction, but it appears to be diurnal and of a retiring habit.

Food.—I have never found anything in the stomach.

Breeding.—Of the specimens I have collected myself, and sexed only two were ♀, and in neither case was the subject gravid. My smallest specimen which I believe to have been a hatchling measured $4\frac{1}{4}$ inches and was obtained at Cannanore in March. I have had two other small examples one from Dehra Dun measuring $6\frac{1}{4}$ inches in July, the other from Cannanore measuring $6\frac{1}{6}$ inches also in July. These notes seem to indicate that the young appear (probably hatching out from eggs) about March.

Distribution.—As will be seen from the accompanying map it occurs in Trans-Indus, in the Indus Basin, the whole of Peninsular India up to the base of the Himalayas as far East as Purneah, and in Ceylon. Variety A occurs throughout the area noted above, but Variety B appears to be peculiar to the Island of Ceylon, and the hills skirting the Malabar Coast as far North as Matheran. The exact localities are as follows and are numbered in black on the map. 1 Khila Abdullah (I. M.), 2 Malakand (I. M.), 3 Karachi (I. M. and B. M.), and Hyderabad (F. W.), 4 Rajanpur (I. M.), 5 Dehra Dun (I. M. and F. W.) and Dhikala (Garhwal Dist.) (F. W.), 6 Delhi (F. W.), 7 Ajmer (B. M.), 8 Purneah (I. M.), 9 Barrakur (I. M.), 10 N. Godavery District (I. M.), 11 Chota Nagpur (I. M.), 12 Aska (B. M.), 13 Vizagapatam (Russell) and Vizianagram (F. W.), 14 Ellore (Blanford), 15 Madras (B. M.), 16 Trichinopoly (F. W.), 17 Tuticorin (F. W.), 18 Trincomalee (B. M.), 19 Colombo (Haly. Cat. Snakes, Colombo Mus., 1886, p. 8), 20 Trivandrum (Ferguson, Bomb. N. H. Journ., Vol. X, p. 71), 21 Travancore Hills (Ferguson, Loc. Cit.), and Permade (I. M.), 22 Anamallays (B. M.), 23 Nilgiris (B. M.), 24 Cannanore (F. W.), 25 Bangalore and Koppa (I. M.), 26 Wynad (B. M.), 27 Karwar and Goa Ghats (Bo. M.), 28 N. Canara (Jerdon), 29 Matheran (Bo. M.), 30 Poona (Bo. M.), 31 Deolali, Khandalla, Satara (Bo. M.), 32 Bombay (Bo. M.), 33 Khandesh (Bo. M.), 34 N.-W. Provinces and Oudh (Murray, Zool., Sind, p. 375).

NOTE.—B. M. implies British Museum ; I. M. Indian Museum ; Bo. M. Bombay Society's Museum.

Lepidosis. Rostral.—Touches 6 shields, the rostro-nasal, and rostro-internasal sutures subequal or the latter longest ; the portion visible from above one half (or nearly) the distance from the end of the snout to the frontal. *Internasals.*—Two, the suture between them, equal to or nearly one half the suture between the præfrontal fellows ; half or less than half the internaso-præfrontal sutures. *Præfrontals.*—Two, the suture between them half or less than half the præfronto-frontal sutures ; in contact with internasal, posterior nasal, loreal, præocular, supraocular, and frontal*. *Frontal.*—Touches 6 shields, the supraocular sutures rather the longest. *Supraoculars.*—Length subequal to frontal, breadth about half that of the frontal. *Parietals.*—Touch one or two postoculars. *Nasals.*—Divided ; in contact with the 1st and 2nd supralabials. *Loreal.*—One, small, as long as high, little longer than half the nasals (rarely confluent with præfrontal, Günther). *Præoculars.*—One. *Postoculars.*—Two (rarely three). *Temporals.*—One, touching the 5th and 6th supralabials. *Supralabials.*—7 (rarely 6 or 8), the 3rd and 4th touching the eye (or 3rd only in rare examples owing to a confluence of two of the normal shields). Rarely the 6th shield just fails to reach the labial margin. *Infralabials.*—4, (rarely 5), the 4th largest, and in contact with two scales behind. *Sublinguals.*—Two pairs, the posterior about two-thirds the anterior, and in contact with the 4th only of the infralabial series. *Costals.*—15 in the whole body length, the last row slightly enlarged ; no keels ; apical pits present, and single. *Ventrals.*—Angulate. In Variety A. ♂ 158 ? to 184, ♀ 158 ? to 218. † In Variety B ♂ 158 to 169, ♀ 174 to 184. *Anal.*—Divided (rarely entire). *Subcaudals.*—Divided. In Variety A they are 38 to 55 in ♂, 37 to 52 in ♀ ; in Variety B 38 to 46 in ♂, 36 to 40 in ♀.

Dentition (a) Maxillary.—The maxilla has an edentulous space anteriorly which would accommodate about 3 teeth of the size of the foremost of the series. It supports 6 or 7 very compressed teeth of

* In one specimen of Variety B in our Society's collection these shields are completely separated by the frontal.

† The number of the ventrals varies somewhat according to locality. In the Oriental Region they range between 158 ? and 184 in ♂, and 158 ? and 204 in ♀, but in the Indus and Trans-Indus tracts a ♂ has 186, and the range for 4 ♀ is 200 to 218.

syncranterian type (*i.e.* rapidly increasing in size from before backwards). The *palatine* bone supports a single small tooth (sometimes none?) situated about the middle of its length. The *maxillary* series number 6 to 10 *, and are preceded by a long edentulous space. The *mandibular* series number about 12, which are compressed, rather small and subequal. A short edentulous space that would accommodate about one tooth precedes the dental array. (See Figs. D and F of Diagram).

* Boulenger says (Cat. Vol. II, p. 233) that there are no pterygoid teeth in the Oligodontides, but he is mistaken. In the three species of which I have skulls (*subgriseus*, *aorsalis* and *venustus*) pterygoid teeth are present.

(To be continued.)



1a.



1c.



2a.



2c.



1b.



1d.



2b.



2d.